

IN THE CLAIMS

Claim 1. (Currently Amended) An MPEG video decoder for an MPEG bit stream ~~into which a plurality of pictures and a plurality of parameters of each layer are encoded, the parameters including a parameter of a sequence layer representing any one of a horizontal size and a vertical size of the pictures~~ which includes at least a sequence header, a first picture header immediately followed by first picture data, and a second picture header immediately followed by second picture data, wherein the first picture header, the second picture header, and the sequence header contain a first parameter, a second parameter, and a third parameter, respectively, the MPEG video decoder comprising:

an image decoding section which decodes the MPEG bit stream ~~to obtain the pictures and the parameters;~~

a frame memory which ~~is connected to the image decoding section, and includes~~
a first picture bank which stores ~~[[a]] first~~ decoded picture data ~~currently obtained by the image decoding section~~ decoding the first picture data;

a first parameter bank which is associated with the first picture bank and stores the first parameter and the third parameter obtained by the image decoding section from the first picture header and the sequence header, respectively ~~first parameters for displaying the first picture;~~

a second picture bank which stores ~~[[a]] second~~ decoded picture data ~~obtained by the image decoding section~~ decoding the second picture data ~~immediately before the first picture; and~~

a second parameter bank which is associated with the second picture bank and stores the second parameter and the third parameter obtained by the image decoding section from the second picture header and the sequence header, respectively ~~second parameters for displaying the second picture;~~

a decode control section which controls the image decoding section; and

a display control section which ~~is connected to the decode control section and to the frame memory, and~~ carries out a display control of the first decoded picture data stored in the first picture bank ~~and the second picture based on the first parameters and the second parameters~~ the first parameter and the third parameter stored in the first parameter bank, and carries out a display control of the second decoded picture data stored in the second picture bank based on the second parameter and the third parameter stored in the second parameter bank, respectively, wherein

~~the first parameters and the second parameters include an identical parameter of the sequence layer.~~

Claim 2. (Currently Amended) The MPEG video decoder according to claim 1, further comprising

a status register which indicates a status of the first picture bank and the second picture bank, and wherein

the decode control section updates the status register when any one of the first decoded picture data and the second decoded picture data is obtained, and the display control section updates the status register when any one of the first decoded picture data and the second decoded picture data is displayed.

Claim 3 (Currently Amended) The MPEG video decoder according to claim 1, wherein the image decoding section includes an internal buffer ~~that temporarily stores the first pictures and the first parameters.~~

Claim 4. (Canceled)

Claim 5. (Currently Amended) The MPEG video decoder according to claim 3, further comprising a data transfer path for transferring the first decoded picture data, the first ~~parameters~~ parameter, the second decoded picture data, ~~[[and]]~~ the second ~~parameters~~ parameter, and the third parameter between the internal buffer and the frame memory.

Claim 6. (Currently Amended) The MPEG video decoder according to claim 3, wherein the image decoding section reads out the ~~second parameters~~ first parameter and the third parameter from the ~~second~~ first parameter bank and transfers the same to ~~[[into]]~~ the internal buffer, ~~decodes the MPEG bit stream to obtain the first picture and a parameter, obtaining the first parameters by overwriting a part of the second parameters in the internal buffer with the parameter~~ overwrites the first parameter in the internal buffer with the second parameter obtained by the image decoding section from the second picture header, and ~~[[write]]~~ writes the first ~~parameters~~ second parameter and the third parameter in the internal buffer into the first second parameter bank.

Claim 7. (Previously Presented) The MPEG video decoder according to claim 1, wherein the decode control section operates asynchronously with a vertical synchronization signal, and the display control section operates in synchronism with the vertical synchronization signal.

Claim 8. (Previously Presented) The MPEG video decoder according to claim 2, wherein the display control section does not update the status register when a reference picture of other pictures is displayed.

Claim 9. (Currently Amended) An MPEG video decoding method for an MPEG bit stream ~~into which a plurality of pictures and a plurality of parameters of each layer are encoded, the parameters including a parameter of a sequence layer representing any one of a horizontal size and a vertical size of the pictures~~ which includes at least a sequence header, a first picture header immediately followed by first picture data, and a second picture header immediately followed by second picture data, wherein the first picture header, the second picture header, and the sequence header contain a first parameter, a second parameter, and a third parameter, respectively, the MPEG video decoding method comprising:

storing the first parameter and the third parameter obtained from the first picture header and the sequence header, respectively, into a first parameter bank in a frame memory;

~~reading first parameters for displaying a first picture~~ the first parameter and the third parameter from a frame memory the first parameter bank into a buffer;

~~decoding the MPEG bit stream to obtain a second picture and a parameter;~~
~~obtaining second parameters for displaying the second picture by overwriting a~~
~~part of the first parameters with the parameter~~
overwriting the first parameter in the buffer with the second parameter obtained
from the second picture header;
~~storing the second picture and the second parameters into the frame memory,~~
wherein
~~the first parameters and the second parameters include an identical parameter of~~
~~the sequence layer~~
storing the second parameter and the third parameter in the buffer into a second
parameter bank in the frame memory; and
storing second decoded picture data obtained by decoding the second picture
data into a second picture bank in the frame memory, wherein
the first parameter bank is associated with the first picture bank, and
the second parameter bank is associated with the second picture bank.

Claims 10-12. (Canceled)